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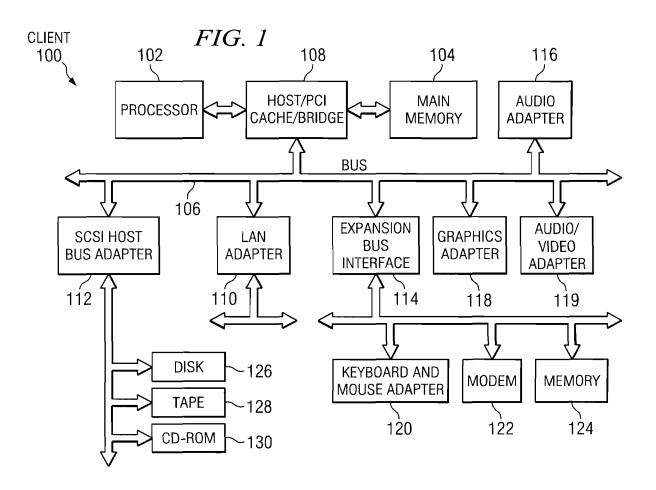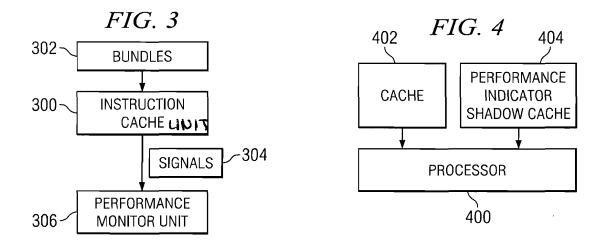DeWitt, Jr. et al.
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CLIENT
100

FIG. 1

FIG. 3

302 — BUNDLES

300 — INSTRUCTION CACHE UNIT

SIGNALS — 304

306 — PERFORMANCE MONITOR UNIT

FIG. 4

402 — CACHE

404 — PERFORMANCE INDICATOR SHADOW CACHE

PROCESSOR

400

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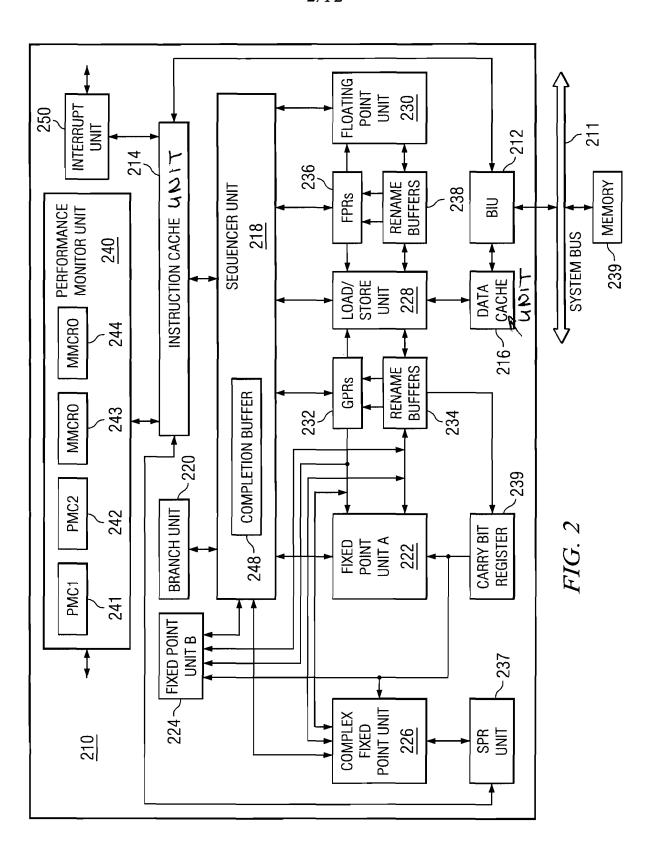2/12

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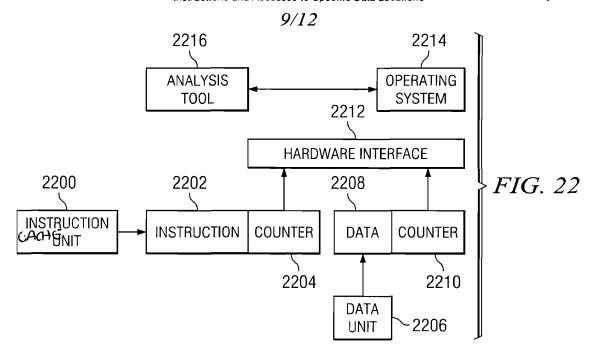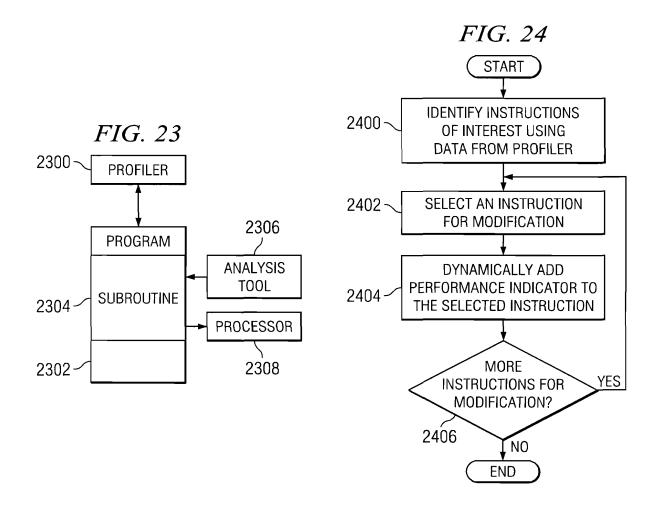
FIG. 2

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FIG. 22

2216
ANALYSIS TOOL

2214
OPERATING SYSTEM

2212
HARDWARE INTERFACE

2200
INSTRUCTION CACHE UNIT

2202
INSTRUCTION | COUNTER

2208
DATA | COUNTER

2204

2210

2206
DATA UNIT

FIG. 23

2300
PROFILER

PROGRAM

2306
ANALYSIS TOOL

2304
SUBROUTINE

2308
PROCESSOR

2302

FIG. 24

START

2400
IDENTIFY INSTRUCTIONS OF INTEREST USING DATA FROM PROFILER

2402
SELECT AN INSTRUCTION FOR MODIFICATION

2404
DYNAMICALLY ADD PERFORMANCE INDICATOR TO THE SELECTED INSTRUCTION

2406
MORE INSTRUCTIONS FOR MODIFICATION?

YES

NO

END

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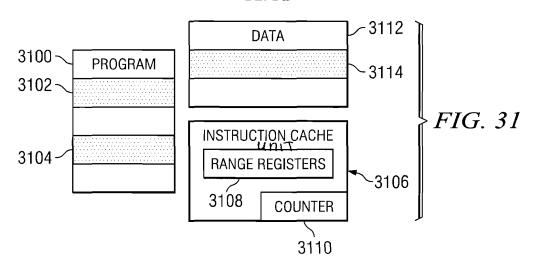Instructions and Accesses to Specific Data Locations

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FIG. 31

FIG. 32